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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/688,063 | 10/13/2000 | Michael J. Natan | SURR-30 | 1277 |

7590

07/08/2003

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EXAMINER

CROSS, LATOYA I

ART UNIT

PAPER NUMBER

1743

20

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Applicati n No. 09/688,063 | Applicant(s) NATAN ET AL. | |
| | Examiner LaToya I. Cross | Art Unit 1743 | |

-- The MAILING DATE of this communication appears on th cover she t with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8, 10-19, 29-45, 47, 49-52 and 59-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 11 and 59-63 is/are allowed.
- 6) ☒ Claim(s) 2-8, 12, 14, 15, 17-19, 29-32, 34, 35, 37-45, 47 and 49-51 is/are rejected.
- 7) ☒ Claim(s) 13, 16, 33, 36 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 29, 2003 has been entered. Claims 2-8, 10-19, 29-45, 47, 49-52 and 59-63 are pending.

Continued Examination Under 37 CFR 1.114

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-6, 7, 8, 12, 14, 15, 29-32, 35, 37-47 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,279,742 to Markell et al.

Markell et al '742 teach a method for isolating contaminants from a sample by way of solid phase extraction. Markell et al '742 uses an extraction medium having a polytetrafluoroethylene fibril disks enmeshed with sorptive particles (solid supports). The sorptive particles are in the form of particulates, fibers, granules, beads or powders, as recited in claims 2-5, 14, 44 and 45 (col. 3, lines 16-21). The particles are encapsulated with coatings (extraction phases) such as polymers, aliphatic groups (C8 and C18) and other organic coatings,

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as recited in claims 7, 32, 47 and 49 (col. 4, lines 38-68). The coatings can be varied to provided selectivity in molecular separation and polarity (col. 4, lines 51-68). At col. 10, lines 45-51, Markell et al '742 teach that where combinations of contaminants are to be extracted, different types of coated particulates should be used, as recited in claims 15, 29-31, and 35. Further, Markell et al '742 teach that the extracted contaminants may be eluted and the analytes determined, as recited in claims 8, 37-40. With respect to claims 41 and 42, Markell et al teach that 5 or more extraction probes may be used where combinations of analytes are to be separated (col. 10, lines 45-51). With respect to Applicants' claimed "combinatorially derived" extraction phases, Markell et al meet this limitation in its teaching that the extraction phases can contain variation in its chemical composition so as to provide selectivity in molecular separation (col. 4, lines 66-67). In other words, the coatings, which serve as extraction phases, may contain different chemistries to allow extraction of several different analytes. Examples 1 and 2 of the reference demonstrate extraction and isolation of contaminants from a sample.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be anticipated, within the meaning of 35 USC 102(b) in view of the teachings of Markell et al '742.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 17-19, 34, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markell et al in view of US Patent 5,766,962 to Childs et al.

The disclosure of Markell et al is described above.

Markell et al differs from the instant invention in that 1) there is no teaching of the particular methods and techniques for distinguishing extraction probes and 2) there is no teaching of proteins used as extraction phases.

With respect to the techniques for distinguishing extraction probes, optical techniques, as well as those such as absorbance and fluorescence detecting are conventionally used in the art of analyzing substances. It would have been obvious to one of ordinary skill in the art to use any technique to analyze the extraction probes of Markell et al according to the extracted analytes.

With respect to using proteins as extraction phases, Childs et al teach analyzing samples for target analytes, where some analytes must be extracted from the sample. Childs et al further teaches that extraction of some analytes requires the presence of a protein, such bovine serum albumin. It would have been obvious to one of ordinary skill in the art to use proteins in the extraction of certain analytes, recognizing that proteins can aid in the extraction of certain analytes from liquid samples.

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Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, with the meaning of 35 USC 103 in view of the teachings of Markell et al and Childs et al.

Allowable Subject Matter

7. Claims 10, 11 and 59-63 are allowed.

8. Claims 13, 16, 33, 36 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 10, 11 and 59-63, Applicants' claims are directed to providing a "position-addressable" array of extraction probes in conjunction with an array of capillaries addressable by the extraction probes. Position addressable arrays, as claimed by applicant, will allow extraction of the same or different analytes from multiple samples. The prior art of record fails to teach or suggest such position addressable arrays of extraction probes.

With respect to claims 13 and 16, Applicants claim that the extraction probes and/or extraction phases are encoded by the solid supports. Such is not taught or suggested in the prior art of record.

With respect to claims 33 and 52, Applicants claim extraction phases comprising self assembled monolayers. The prior art of record teaches fibers and particles, but fails to teach or suggest self assembled monolayers.

With respect to claim 36, Applicants claim that the extraction phases are selected from a combinatorial library, which is not taught or suggested in the prior art of record.

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Response to Arguments

9. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 703-305-7360.

The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 703-308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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June 29, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1700